AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A video processor comprising:

a bit rate converter for converting an M-bit input video signal to an N-bit output video signal by retaining grayscale levels of the M-bit input video signal, wherein N is smaller than M; and

a gamma correction memory in which a plurality of N-bit input grayscale levels are mapped to a plurality of K-bit output grayscale levels which are distributed on a non-linear curve corresponding to a non-linear curve on which grayscale levels of a display device are distributed, when said N-bit output video signal of said bit rate converter corresponds to one of the plurality of N-bit input grayscale levels,

said gamma correction memory delivering one of the plurality of K-bit output grayscale levels to said display device.

2. (previously presented): The video processor of claim 1, wherein K is equal to N.

3. (previously presented): The video processor of claim 1, wherein said K-bit output grayscale levels are interpolated grayscale levels of the N-bit input grayscale levels.

4. (previously presented): The video processor of claim 1, wherein K is equal to M.

5. (original): The video processor of claim 1, wherein said bit rate converter comprises means for truncating lower significant bits of the M-bit video signal, representing the truncated lower significant bits by a different number of binary-1's, and distributing the binary-1's over a varying number of subsequent frames depending on the truncated lower significant bits.

6. (previously presented): The video processor of claim 1, wherein said bit rate converter comprises:

a first adder for adding a binary-1 to the least significant bit position of higher N bits of the M-bit input video signal;

a first multiplexer for selecting an output of said first adder or said higher N bits in response to a first control signal;

a first frame memory for storing an output of said first multiplexer;

a second adder for adding a binary-1 to an output of the first frame memory;

a second multiplexer for selecting an output of said second adder or an output of said first frame memory in response to a second control signal;

a second frame memory for storing an output of said second multiplexer;

a third adder for adding a binary-1 to an output of the second frame memory;

a third multiplexer for selecting an output of said third adder or an output of said second frame memory in response to a third control signal;

a third frame memory for storing an output of said third multiplexer; and

control means for producing said first control signal only, said first and second control signals simultaneously, or said first, second and third control signals simultaneously, depending on the truncated lower significant bits.

7. (original): The video processor of claim 1, wherein said bit rate converter comprises means for truncating lower significant bits of the M-bit video signal so that N bits are left in the input video signal, and dithering the N bits according to the truncated lower significant bits.

8. (previously presented): The video processor of claim 1, wherein said bit rate converter comprises:

an adder for adding a binary-1 to higher N bits of the M-bit input video signal;

a multiplexer for selecting an output of said adder or said higher N bits of the M-bit input video signal in response to a control signal; and

a comparator for producing said control signal by making a comparison between lower significant bits of said M-bit input video signal and a threshold value.

9. (previously presented): A bit rate converter comprising:

an input register for receiving an M-bit input video signal;

a first adder for adding a binary-1 to a least significant bit position of a higher N bits of the M-bit input video signal;

a first multiplexer for selecting an output of said first adder or said higher N bits in response to a first control signal;

a first frame memory for storing an output of said first multiplexer;

a second adder for adding a binary-1 to an output of the first frame memory;

a second multiplexer for selecting an output of said second adder or an output of said first frame memory in response to a second control signal;

a second frame memory for storing an output of said second multiplexer;

a third adder for adding a binary-1 to an output of the second frame memory;

a third multiplexer for selecting an output of said third adder or an output of said second frame memory in response to a third control signal;

a third frame memory for storing an output of said third multiplexer; and

controller producing said first control signal only, said first and second control signals simultaneously, or said first, second and third control signals simultaneously, depending on truncated lower significant bits of the M-bit video signal.

10. (new): The video processor of claim 1, wherein M is 10.

11. (new): The video processor of claim 1, wherein N is 8.

12. (new): The video processor of claim 1, wherein K is 8.

13. (new): The video processor of claim 1, wherein the M-bit input video signal corresponds to a first component of an RGB color model.

14. (new): The video processor of claim 13, wherein the first component is a red component.

15. (new): The video processor of claim 13, wherein the bit rate converter converts the M-bit input video signal corresponding to the first component independent of signals corresponding to a second and a third component of the RGB color model.

16. (new): The video processor of claim 13, wherein the N-bit input grayscale levels correspond to the first component of an RGB color model.

17. A video processor comprising:

a first component processor for processing a first component of an RGB color model;

a second component processor for processing a second component of the RGB color model; and

a third component processor for processing a third component of the RGB color model, wherein each of the first, second and third components processor comprises:

a bit rate converter for converting an M-bit input video signal to an N-bit output video signal by retaining grayscale levels of the M-bit input video signal, wherein N is smaller than M; and

a gamma correction memory in which a plurality of N-bit input grayscale levels are mapped to a plurality of K-bit output grayscale levels which are distributed on a non-linear curve corresponding to a non-linear curve on which grayscale levels of a display device are distributed, when said N-bit output video signal of said bit rate converter corresponds to one of the plurality of N-bit input grayscale levels,

said gamma correction memory delivering one of the plurality of K-bit output grayscale levels to said display device.

18. (new): The video processor of claim 1, wherein N is 6.

19. (new): The video processor of claim 1, wherein N is less than K.